

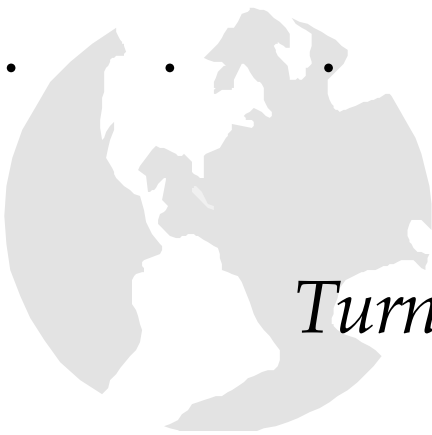
•  
•  
•  
•  
•  
•  
•

New Jersey Department of Transportation  
Bureau of Research  
1035 Parkway Avenue  
PO Box 600  
Trenton, New Jersey 08625-0600

---

# Bureau of Research

## **Strategic Plan** **2005-2008**



*Turning Problems into Solutions*

---

# Bureau of Research

## *Turning Problems into Solutions*

### **Executive Summary**

This document presents the Bureau of Research's strategic plan for 2005-2008. The plan is an update of the 2000-2001 Division of Research and Technology strategic plan and builds on a strategic planning process that began in 2000.

This plan was based on survey results and focus group meeting with research customers, Department senior managers, FHWA NJ Division staff, and university principal investigators and administrators. It was prepared through the joint efforts of Bureau staff, and identifies two major strategic goals and a total of fourteen objectives associated with those goals. The goals are:

Goal 1 – Enhancing Customer Service

Goal 2 – Strengthening the capacity of the Bureau of Research

The research staff that developed the strategic plan is responsible for implementing the objectives and for monitoring progress. Transportation professionals who work in New Jersey and across the Nation are impacted by this strategic plan and have a role in implementing the goals.

Performance measures are identified for each of the Strategic Goals, and the Bureau will report on each of those measures. We will make the reports highly visible within the department and to others with an interest in the research program. We will develop data collection and reporting systems and collect baseline information as a foundation for evaluating progress for performance measures.

### **Organization**

The Bureau of Research was organized in 1999 as part of the new Division of Research and Technology. It had been downsized from the original fifty-member Division of Research and Demonstration which performed more than ninety percent of the Department's research in-house. The Bureau currently contracts for research with its university research partners at the New Jersey Institute of Technology, Rowan University, Rutgers University, Stevens Institute of Technology, and the University Transportation Research Center and oversees the Department's Research Library.

The Bureau consists of a thirteen-member staff. There are seven Research project managers to oversee the research efforts conducted by university partners or performed in-house. In addition, there are four administrative staff and the Research Librarian.

Projects are initiated by customers from the New Jersey Department of Transportation (NJDOT), NJ Transit and Motor Vehicle Commission (MVC), coordinated by the Research Users Committee and overseen by a Research Project Selection and Implementation Panel (RPSIP).

This strategic plan was developed by (and for) all Bureau staff who will actually carry out the plan.

**Bureau Members**

Nicholas Vitillo, Manager	Stephanie Nock, Secretary II
Nazhat Aboobaker, Principal Engineer	Lad Szalaj, Project Manager
Karl J. Brodtman, Project Manager	Robert Sasor, Project Engineer
Anthony Chmiel, Project Engineer	Lorraine Stallings, Admin. Analyst II
Andrea Herrick, Administrative Assistant III	Nicole Onorati, Clerk Typist
Edward Kondrath, Project Manager	Carol Paszamant, Research Librarian
Vincent Nichnadowicz, Admin. Analyst II	

**Mission**

Our core purpose is to provide current and quality information, analysis, and value-added solutions to transportation professionals within New Jersey and throughout the Nation.

We will perform the following roles to accomplish our mission:

Interpreters for the operational units, converting their problems and needs into detailed dialogs with university research partners to seek timely solutions that can move NJDOT forward

Facilitators to bring together experience, knowledge, and technology to address these pressing problems

Educators to spread the knowledge gained from our successes and failures and to search for solutions through technology transfer and quality research activities

Researchers to conduct in-house research projects

Evaluators to assess and demonstrate usability of new technology and practices

Implementers using the knowledge gained through the research effort to make a positive change in the way our customers do business

Research Manager negotiates and manages university research projects

## Core Values

We believe in professional collaborative relationships with all our customers, partners and colleagues and in operating in an environment of mutual respect, integrity, collegiality and support.

We commit to producing the highest quality research and demonstration products that meet or exceed customer expectations, and to delivering them in a timely manner.

We anticipate the Department's needs, communicating with stakeholders, and reaching out to the transportation community.

We emphasize innovation among staff and customers in seeking solutions to transportation problems. We believe in spanning boundaries, taking risks and championing new ideas.

We foster recruitment and development of new transportation research professionals and continue with the education and professional development of staff.

## Vision

The Bureau of Research is a premier transportation research organization that all New Jersey transportation professionals think of first to help them with their transportation problems. For us this means:

- We are the Bureau.
- We know our customers. We work closely with staff from all New Jersey transportation organizations. We meet regularly with groups who have an interest in what we do. We use every available tool or technique to monitor our customer's needs and priorities. Each Bureau employee responds to customer needs and concerns.
- We are the best source of transportation information. We have the most current, accurate and insightful information, and the information is easy to get. We publish materials on the results of our research findings. We provide information in a customized format for specific issues, and all of our data is available through electronic channels.
- We have an aggressive, action-oriented planning program to ensure research is done where and when it is needed. We plan ahead and are prepared. We respond when needed.
- We are a vital, active participant in providing quality transportation services in New Jersey. We understand the connections between state-of-the-art engineering and construction products, and customer friendly transportation systems. We are planning and conducting research for our customers in the Department of Transportation and all state transportation organizations to assist them in moving

in the direction they want to go. We are committed to ensuring research findings are implemented.

- Every person who visits or contacts the Bureau of Research is impressed with what they see and in the way they are treated. Phones are answered. Calls are returned. Mail is answered promptly and completely. Our office and staff reflect pride and commitment to excellence.
- The requirements we have set for research problem statements and contracts are easy to understand. Decisions are prompt, clearly explained and logical. Every applicant and customer is treated the same -- as if they were our only customer.
- We are-known as a good partner to our university researchers and consultants. We are clear about what we expect, consistent in the way we do business and responsive to better ideas. We keep our promises and meet our obligations. Agreements are executed promptly and bills are paid when due.
- We set the standard. We are more resourceful, more experienced, more diverse, more responsive and more action-oriented than the employees of any other organization; and we listen better. We trust and respect each other, and we are trusted and respected.
- We do all of our jobs well. If it doesn't add value, we quit doing it. If it needs doing, we do it without being told, prompted or reminded.
- We have a clear direction and we are moving in that direction as a team. We all have the same accurate, timely information. We all know what we are doing and why.

## **Critical Factors For Success**

### **Customer Satisfaction**

We will continually pay attention to customer feedback and adjust our processes and products to better meet their needs. We also will be clear with potential customers about ways we can be of service.

### **Research Implementation**

We will work closely with our customer's organizations to significantly increase the implementation rate of our research products to provide a better return on investment in research and to market the value of the research program.


### **Resource Growth**

We will increase both our funding base and staffing to better serve the needs of the state's transportation community.

# Goals, Objectives and Performance Measures

*Turning Problems into Solutions*

2005-2008



## Strategic Goals

### Goal 1 Enhance Customer Service

#### Strategy 1.1 Continuously solicit customer and organizational feedback on both program and project issues

*Action 1. Identify levels of customers and align levels with products*

- Identify products and services for senior management, anticipate their needs – respond rapidly
- Identify products and services for middle management and organizational areas

*Action 2. Develop systems of formal and informal feedback*

- Increase contact/interaction with customers (persons and units)

*Action 3. Involve customers and organization unit managers in project decision-making*

- Identify a customer organization “implementation champion”
- Publish the Annual Research Quarterly Meeting schedule announcements on NJDOT Intranet site to ensure that the customer, manager, and organization implementation champions are aware of the dates
- Ensure customers, members of each RPSIP, managers, and organization champions have knowledge of the date, time and location of each project quarterly meeting
- Provide customer, manager, and organization implementation champion with the project quarterly report in sufficient time for their review
- Obtain RPSIP concurrence to the quarterly report for project invoicing
- Debrief each research project for improvement opportunities
- Ensure the findings, conclusions, recommendations, and documentation match the needs of the customer and organization

**Strategy 1.2    Negotiate each project problem with the appropriate division management**

*Action 1. Assist the Organizational Unit with the solicitation of their research needs*

**Strategy 1.3    Attend appropriate Department “scoping meetings”**

**Strategy 1.4    Significantly increase the number of projects that are successfully implemented**

*Action 1. Increase weight given to evaluating implementation plans in project proposals*

*Action 2. Build implementation ideas/requirements into research contracts*

- Clarify implementation requirements
- Share implementation responsibility with customer, RPSIP, and Organizational Implementation Champion

*Action 3. Develop implementation guidelines*

- Define implementation “success” at the beginning of the project

*Action 4. Require research project managers and the RPSIP to develop work plans for implementation*

*Action 5. Target up to 20% of the Research Bureau’s budget for implementation expenses*

*Action 6. Create a process for implementation of research findings from other sources as part of Rapid Research projects (Pipeline 2)*

- Develop a mechanism for demonstration projects

*Action 7. Have other states present their research findings*

*Action 8. Support customers in the risk taking involved in successful implementation*

*Action 9. Provide training on research findings*

- Partner with the Department Training Unit and other organizational units to provide training
- Provide training for industry, consultant, and contractor organizations

*Action 10. Identify non-NJDOT successful implementation of research findings*



**Strategy 1.5    Conduct forums with the University Research Partners to address issues rising from the strategic plan surveys and focus group meetings**

*Action 1. Improve project completion “on-time” delivery*

*Action 2. Focus on creating more tangible research products that can be reasonably implemented*

- Reinforce the need for emphasis on implementation of the research findings
- Reinforce the need for interaction with the operational organizations in promoting implementation and training of the staff in the Department, industry (contractors and suppliers), and consulting organizations

*Action 3. Improve the quality of final research reports*

- Organize a concise report that targets the customer’s objectives and needs based on the RFP, proposal, and quarterly meetings

*Action 4. Revise the current format guide to improve the report design*

- Determine report page limits
- Develop a clear definition of “concise”
- Require final reports to be concise
- Create examples of good and bad final reports

*Action 5. Require universities to use of technical editor and/or a peer reviewed process*

*Action 6. Design and deliver a training course in technical writing for Department staff and university partners*

*Action 7. Require certification of the draft final report by the Principal Investigator, and Department Chairman or Center Director*

**Strategy 1.6    Simplify ease of access to information**

*Action 1. Complete the development and implementation of the Research Library portion of the Research Bureau Intranet/Internet site*

*Action 2. Add the Research Library website to the Research Bureau Intranet/Internet site*

### **Strategy 1.7    Develop a “differential research projects” process**

*Action 1. Create a “pipeline” classification system for research projects that mirrors the one used by CPM and Operations*

- Pipeline 1, 2, & 3 -- Pipeline one is a full research project of one year or more with university partner or performed in-house; Pipeline two is a rapid research, pilot implementation or demonstration project less than one year with university partner or performed in-house; Pipeline three is a survey, literature search, or research consulting services effort
- Define pipeline one and give examples
- Define pipeline two and give examples
- Define pipeline three and give examples
- Increase pipeline two and three projects
- Gain RUC support for pipeline concept
- Get senior management approval for pipeline concept

*Action 2. Market the “pipeline” concept to all stakeholder groups*

*Action 3. Create a research customer education program*

*Action 4. Implement the “pipeline” concept*

- Modify the Research Final Disposition Report (FDR) to include the Pipeline selection and assignment of the Organizational Implementation Champion by April 2005

### **Strategy 1.8    Institute policies to insure timely delivery of quarterly reports, technical memorandums, and draft final reports by university partners**

*Action 1. Institute a policy of limiting time extensions and requiring customer’s approval for any extension*

*Action 2. Develop a policy requiring universities to add additional staff or hire consultants to speed-up their process so they can deliver research products on time*

#### **Performance Measures for Goal 1**

- ❑ Customer Satisfaction Index based on an annual customer survey of Pipeline 1, 2, and 3 research activities.
- ❑ Customer Sign-off based on percent of the program 1) implementable, 2) implemented, and 3) not implementable.
- ❑ Percent of Projects delivered 1) on time, and 2) on budget

- ❑ Cost and time savings for the Department

**Goal 2 Strengthening the capacity of the Bureau of Research to provide quality products.**

**Strategy 2.1 Hire and retain excellent staff at a level needed to deliver a high quality transportation research program for the state**

*Action 1. Create workload standards to identify staffing needs and balance work assignments*

*Action 2. Develop a Bureau succession plan (hiring and mentoring)*

*Action 3. Gain senior management approval to hire additional staff and retain current staff through promotional opportunities*

*Action 4. Change the department paradigm to hire BEFORE someone leaves*

- Maintain current staffing level at all times
- Identify skill areas needed before hiring

*Action 5. Train new people within 6 months of hiring*

- Each new staff person receives a Bureau orientation within two weeks of being hired
- New staff are assigned mentors within one week of hiring
- Negotiate with universities to get new Research bureau staff involved in research projects within three months of hiring

*Action 6. Explore staff cost-sharing mechanisms with other organizations*

- Outline a program for post education employment commitment for tuition
- Outline a student co-op program
- Outline a student intern program
- Create agreements to share staff with other agencies (Mobility) for career development
- Create Research Bureau in-house mobility assignments

**Strategy 2.2 Pursue alternative sources of funding to reduce instability and increase opportunities.**

*Action 1. Benchmark Bureau funding against the best funded DOT Research programs nationally*

*Action 2. Diversify funding sources*

*Action 3. Investigate outside Federal Grants through a research project*

*Action 4. Explore cost sharing for research projects with non-DOT organizations*

*Action 5. Explore matching funds from operational units for implementation efforts*

*Action 6. Convince Senior Management to increase the Research share of the SPR funds*

*Action 7. Convince Senior Management to take the TRB and NCHRP dues off the top of the SPR funds before dividing the funds between Planning and Research*

**Strategy 2.3 Explore a partnership structure with the Department's New Technology and Products Group**

*Action 1. Produce a joint Annual Report that highlights the program and products of both organizations*

*Action 2. Provide link to New Technologies and Products web site on the Research web site*

*Action 3. Add a New Technologies and Products feature to the Annual Research Showcase to promote the implementation of value-added products*

**Strategy 2.4 Increase the Bureau's ability to market its capabilities to deliver products and services, proving its value to the Department**

*Action 1. Train staff in marketing.*

*Action 2. Develop a Bureau marketing plan*

- Obtain testimonials from satisfied customers
- Clearly explain the research process
- Circulate Tech Briefs and technology transfer information
- Clarify the link between the Bureau and the Research Library
- Develop a document that summarizes the value of the Research Program keying on implementation and economic benefit
- Require an implementation and marketing plan for research projects
- Publicize a Research Implementation success story in the "what's new" section of the Research web site including photos and names of organizational unit personnel
- Include the names of the RPSIP members on the Acknowledgements page of the final reports

*Action 3. Provide help to customers beyond current projects*

*Action 4. Educate new managers and organizations by using the Department's Management Announcements to schedule meetings with these individuals and their staffs*

*Action 5. Regularly update Department staff on research done for all organizations through tech briefs, quarterly meetings, "brown bag" lunches, and articles in the Transporter on high payoff project completion and implementation efforts*

*Action 6. Participate in presenting research findings at TRB and other National forums*

*Action 7. Include implementation successes as a feature of the annual Research Showcase*

*Action 8. Add a "Research Hall of Fame" section to the Research Web Site for successful implementation projects*

#### **Strategy 2.5    Expand the Bureau's partnerships with outside organizations**

*Action 1. Ensure FHWA participation on all Research Project Selection and Implementation Panels*

*Action 2. Meet with FHWA-NJ Division staff to educate them on the research program and organization*

*Action 3. Promote support for the research program and organization through the FHWA interaction with NJDOT and NJ Transit units*

*Action 4. Promote support for the research program and organization with others State and National organizations*

*Action 5. Enhance communications with industry and consultant organizations*

*Action 6. Routinely engage industry and consultant organizations in implementation and training efforts*

#### **Strategy 2.6    Explore the development of a New Jersey Transportation Institute**

*Action 1. Investigate the development, organization and research processes of Transportation Institutes in other states*

*Action 2. Document the pros and cons of this type of research organization for the State of New Jersey*

*Action 3. Invite directors of transportation institutes from other states to address the senior leadership team of the Department*

- Promote the modification of the current NJDOT research model

*Action 5. Explore the involvement of university, industry (contractors and suppliers), and consultant communities along with the NJDOT, NJ Transit,*

*Motor Vehicle Commission, FHWA, FTA, and other Transportation Action 1.  
Action 6. Organizations in the operations and funding of a Statewide  
Transportation Institute*

*Action 7. Include representation from the State Senate and Assembly  
Transportation Committees*

## **Performance Measures for Goal 2**

- ❑ Percentage of the Program funds from sources other than the traditional Research SPR and Transportation Trust Fund
- ❑ Research Bureau Satisfaction Index based on annual interviews with customers, university research partners, and FHWA
- ❑ Percent of training and implementation efforts that involved industry and consultant organizations.